

ADDITIONAL NOTES ON THE GENUS CHASCANUM. II

Harold N. Moldenke

CHASCANUM E. Mey.

Literature: L., Mant. 2: 251. 1771; Houtt., Handleid. Pl. & Kruidk. 9: 542--543, pl. 58, fig. 2. 1778; L. f., Suppl. Pl. 277 & 288. 1781 [and Japanese reprint, 1936]; L. f., Pflanzensyst., ed. Houtt., 8: 129--130. 1782; L. f., Syst. Veg., ed. 14 by J. A. Murray, 571. 1784; L. f., Syst. Veg., ed. 15 [14, revised] by Murray & Persoon, 608. 1797; Thunb., Prodr. Pl. Cap. 100. 1800; R. Br. in Salt, Voyage Abyss., append. lxxiii ["lxiii"]. 1814; Thunb., Fl. Cap., ed. Schultes, 466. 1823; E. Mey., Comment. Pl. Afr. Austr. 1 (1): lxiv (1836) and 1 (2): 275--277. 1837; Raf., Fl. Tellur. 2: 104. 1837; Schlecht., Linnaea Litt.-Bericht 11: 3--5. 1837; Harv., Gen. S. Afr. Pl., ed. 1, 269. 1838; Endl., Gen. Pl. 634. 1838; Walp., Linnaea 13: 451. 1839; Maund & Henslow, Botanist 4: 196. 1840; Hochst., Flora Intelligenzbl. 24, 1: 42. 1841; Meissn., Journ. Bot. Lond. 5: 60. 1843; Hochst., Flora 28: 68. 1845; Walp., Repert. 4: 38--39. 1845; Bot. Zeit. 3: 587. 1845; Schau. in A. DC., Prodr. 11: 557--560. 1847; Wight, Icon. Pl. Ind. Orient. 4 (3): 10, pl. 1461. 1849; Sonder, Linnaea 23: 86--87. 1850; Harv., Thesaur. Cap. 1: 18, pl. 28 (1859) and 2: 57--58, pl. 190. 1863; T. Anders., Journ. Proc. Linn. Soc. 5, Suppl. 28. 1860; Bocq., Adansonia 3: 235--237, pl. 16. 1863; R. Br., Miscel. Bot. Works 1: 93. 1866; Benth., Proc. Linn. Soc. Lond. 1866-1867: xvi. 1867; Harv., Gen. S. Afr. Pl., ed. 2, 290. 1868; Pritzel, Thesaur. Lit. Bot. 317, etc. 1872; Vatke, Linnaea 43: 529. 1882; Oliv. in Hook., Icon. Pl. 15: 37, pl. 1446. 1883; C. B. Clarke in Hook., Fl. Brit. Ind. 4: 564. 1885; Terrac., Bull. Soc. Bot. Ital. 1892: 421. 1892; Engl., Über Hochgeb. Trop. Afr. 355. 1892; Jacks., Ind. Kew. 1: 327, 507, & 733 and 2: 504, 564, & 567. 1895; Briq. in Engl. & Prantl, Nat. Pflanzenfam. 4 (3a): 149 & 153--154. 1895; Natur. Novit. 17: 121. 1895; Kuntze, Rev. Gen. Pl. 3 (2): 250 & 561. 1898; Kuntze, Jahrb. Königl. Bot. Gart. Berlin 4: 271. 1900; J. G. Baker in Thiselton-Dyer, Fl. Trop. Afr. 5: 281--283. 1900; Gürke, Notizbl. Königl. Bot. Gart. Berlin 3: 75--76. 1900; Durand & Jacks., Ind. Kew. Suppl. 1: 61. 1901; H. H. W. Pearson in Thiselton-Dyer, Fl. Cap. 5 (1): 197--206. 1901; Post & Kuntze, Lexic. 167. 1903; Kuntze, Deutsch. Bot. Monatschr. 21: 173. 1903; Thiselton-Dyer, Ind. Kew. Suppl. 2: 28 & 57. 1904; Zahlbr., Annal. K. K. Naturhist. Hofmus. Wien 20: 45. 1905; H. H. W. Pearson, Trans. S. Afr. Philos. Soc. 15 (4): 176--180. 1905; Barnhart, Torreya 7: 177--182. 1907; Dalla Torre & Harms, Gen. Siphonog. 673 & 715. 1907; Prain, Ind. Kew. Suppl. 3: 27. 1908; Chiov., Annal. Bot. Roma 9: 127. 1911; J. M. Wood, Natal Pl. 6 (3): pl. 571. 1911; Jacks., Prod. Linn. Soc. Lond. 124, Suppl. Ind. Linn. Herb. 116. 1912; Prain, Ind. Kew. Suppl. 4: 28. 1913; Druce in Rep. Bot. Exch. Club Brit. Isles 1916: 610. 1917; Prain, Ind. Kew. Suppl. 5: 35. 1921; A. W. Hill,

Ind. Kew. Suppl. 6: 28. 1926; Grenz., Ann. M_o. Bot. Gard. 13: 17--100, pl. 8--12. 1926; Dinter in Fedde, Repert. Beiheft 53: 53. 1928; Stapf, Ind. Lond. 1: 484 (1929) and 2: 164. 1930; Moldenke, Phytologia 1: 18. 1933; A. W. Hill, Ind. Kew. Suppl. 8: 31. 1933; Moldenke, *Torreya* 34: 8--9. 1934; Junell, Symb. Bot. Upsal. 4: 21--30. 1934; Briq., Internat. Rules Bot. Nomen., ed. 3, 13--14. 1935; Moldenke in Fedde, Repert. 41: 129--143. 1936; Moldenke in Fedde, Repert. 45: 113--156, 45: 300--319, and 46: 1--12. 1938; Moldenke, Revist. Sudam. Bot. 6: 15--30. 1939; Moldenke, Prelim. Alph. List Invalid Names 7, 8, 15, 24, 26, 36, & 39. 1940; Ertzman, Svensk Bot. Tidsk. 39: 281--284. 1945; Moldenke, Suppl. List Invalid Names 2. 1941; Moldenke, Alph. List Invalid Names 6, 7, 12, 13, 23, 25, 36, & 39. 1942; Moldenke, Known Geogr. Distrib. 109, 110, 114, 116--121, 123, 124, 157, & 178. 1949.

Synonymy: Chascanum E. Mey., Comment. Pl. Afr. Austr. lxiv, nom. nud. (1836), 1: 275. 1837. Plexipus Raf., Fl. Tellur. 2: 104. 1837. Cascanum Maund & Henslow, Botanist 4: pl. 196, sphalm. 1840. Pleurostigma Hochst., Flora 24, Intell. 1: 42, nom. nud. 1841. Denisia Post & Kuntze ex Jacks., Ind. Kew. 1: 733. 1895. Deniseia Neck. ex Kuntze, Rev. Gen. Pl. 3 (2): 250 & 561. 1898. Deniseia Kuntze ex Post & Kuntze, Lexic. 167. 1903. Denisia Neck. ex Post & Kuntze, Lexic. 167. 1903. Gisania Ehrenb. ex Moldenke in Fedde, Repert. 45: 114, in syn. 1938. Marulea Schrad. ex Moldenke in Fedde, Repert. 45: 114, in syn. 1938. Marrulea Schrad. ex Moldenke in Fedde, Repert. 45: 114, in syn. 1938. Choscanum E. Mey. ex Moldenke in Fedde, Repert. 45: 114, in syn. 1938. Ragusia Schrad. ex Moldenke, Revist. Sudam. Bot. 6: 16, in syn. 1939. Ragasia Schrad. ex Moldenke, Revist. Sudam. Bot. 6: 16, in syn. 1939. Rhagasia Schrad. ex Moldenke, Revist. Sudam. Bot. 6: 16, in syn. 1939. Gizania Ehrenb. ex Moldenke, Prelim. Alph. List Invalid Names 26, in syn. 1940.

Ertzman in Svensk Bot. Tidsk. 39: 281--284 (1945) agrees with me in the segregation of this genus from the American genus Bouchea Cham. on the basis of the pollen morphology. In Chascanum he finds that the pollen grains are tricolporate, while in Bouchea they are triplicate and of a very strange shape.

CHASCANUM ADENOSTACHYUM (Schau.) Moldenke

Literature: Moldenke, *Torreya* 34: 8. 1934; Moldenke in Fedde, Repert. 45: 140--142. 1938; Moldenke, Revist. Sudam. Bot. 6: 16. 1939; Moldenke, Prelim. Alph. List Invalid Names 7 & 15. 1940; Moldenke, Alph. List Invalid Names 6, 7, & 12. 1942; Moldenke, Known Geogr. Distrib. 110, 119, 121, & 178. 1949. Bouchea adenostachya Schau. in A. DC., Prodr. 11: 560. 1847; H. H. W. Pearson in Thiselton-Dyer, Fl. Cap. 5 (1): 199. 1901. Bouchea longipetala H. H. W. Pearson in Thiselton-Dyer, Fl. Cap. 5 (1): 199. 1901. Chascanum longipetalum (H. H. W. Pearson) Moldenke, Phytologia 1: 18. 1933.

CHASCANUM AFRICANUM Moldenke

Literature: Moldenke in Fedde, Repert. 45: 136--138. 1938; Moldenke, Revist. Sudam. Bot. 6: 16. 1939; Moldenke, Known Geogr. Distrib. 110, 116, 117, & 178. 1949.

Additional citations: KENYA: Hildebrandt 2737 (P).

CHASCANUM CAESPITOSUM (H. H. W. Pearson) Moldenke

Literature: Moldenke, Torreyia 34: 8. 1934; Moldenke in Fedde, Repert. 45: 319 & 46: 1. 1938; Moldenke, Revist. Sudam. Bot. 6: 16. 1939; Moldenke, Prelim. Alph. List Invalid Names 7. 1940; Moldenke, Alph. List Invalid Names 6. 1942; Moldenke, Known Geogr. Distrib. 121 & 178. 1949. Bouchea caespitosa H. H. W. Pearson, Trans. A. Afr. Phil. Soc. 15: 178. 1905.

CHASCANUM CERNUUM (L.) E. Mey.

Literature: E. Mey., Comm. Pl. Afr. Austr. 1: 276. 1837; Hochst., Flora 1845: 68. 1845; Schau. in A. DC., Prodr. 11: 559, in syn. 1847; H. H. W. Pearson in Thiselton-Dyer, Fl. Cap. 5 (1): 203, in syn. 1901; Moldenke in Fedde, Repert. 45: 313--315. 1938; Moldenke, Revist. Sudam. Bot. 6: 17. 1939; Moldenke, Prelim. Alph. List Invalid Names 7 & 8. 1940; Moldenke, Known Geogr. Distrib. 121 & 178. 1949. Buchnera cernua L., Mant. 2: 251. 1771 [not B. cernua Houtt., 1778]; Thunb., Prodr. Pl. Cap. 100. 1800; Thunb., Fl. Cap., ed. Schultes, 466. 1823; Schau. in A. DC., Prodr. 11: 559, in syn. 1847; H. H. W. Pearson in Thiselton-Dyer, Fl. Cap. 5 (1): 203, in syn. 1901; Moldenke in Fedde, Repert. 45: 313 & 314, in syn. 1938; Moldenke, Prelim. Alph. List Invalid Names 8, in syn. 1940; Moldenke, Alph. List Invalid Names 7, in syn. 1942. Buchnera cernua L., Syst. Veg., ed. 14, 571. 1734; Moldenke in Fedde, Repert. 45: 313, in syn. 1938. Chascanum cernuum E. Mey., Comm. Pl. Afr. Austr. lxiv, nom. nud. 1836; Moldenke in Fedde, Repert. 45: 313, in syn. 1938. Buechnera cernua L. ex E. Mey., Comm. Pl. Afr. Austr. 1: 276, in syn. 1837; Moldenke in Fedde, Repert. 45: 313, in syn. 1938. Bouchea cernua (L.) Schau. in A. DC., Prodr. 11: 559. 1847; H. H. W. Pearson in Thiselton-Dyer, Fl. Cap. 5 (1): 203. 1901.

Acock states that the flowers of this species are white, blooming in September, and that the plant is found on the slopes of limestone hills.

Additional citations: UNION OF SOUTH AFRICA: Cape of Good Hope: Acock 1504 (S), 2555 (S); Collector undesigned 149 (S); Thunberg s.n. [1773] (S).

CHASCANUM DEHISCENS (L. f.) Moldenke

Literature: Houtt., Handleid. Pl. Kruidk. 9: 542--543, pl. 58, fig. 2. 1778; L. f., Suppl. Pl. 277 & 288. 1781; L. f., Syst. Veg., ed. 14, 571 (1784) and ed. 15, 608. 1797; Thunb., Prodr. Pl. Cap. 100. 1800; Thunb., Fl. Cap., ed. Schultes, 466. 1823; E. Mey., Comm. Pl. Afr. Austr. lxiv (1836) and 1: 276. 1837; Raf., Fl. Tellur. 2: 104. 1837; Maund & Henslow, Botanist 4: pl.

196. 1840; Walp., *Repert.* 4: 38. 1845; Schau. in A. DC., *Prodr.* 11: 559. 1847; Harv., *Thesaur. Cap.* 18. 1851; Kuntze, *Rev. Gen. Pl.* 3 (2): 250 & 254. 1893; Jacks., *Ind. Kew.* 1: 350 & 733. 1895; H. H. W. Pearson in *Thiselton-Dyer*, *Fl. Cap.* 5 (1): 201--202. 1901; *Thiselton-Dyer*, *Ind. Kew. Suppl.* 2: 57. 1904; Jacks., *Ind. Linn. Herb.* 116. 1912; Druce, *Rep. Bot. Exch. Club Brit. Isles* 1916: 610. 1917; Moldenke, *Torreya* 34: 9. 1934; Moldenke in Fedde, *Repert.* 45: 148--153. 1938; Moldenke, *Revisit. Sudam. Bot.* 6: 17. 1939; Moldenke, *Prelim. Alph. List Invalid Names* 7, 8, 15, 24, 36, & 39. 1940; Moldenke, *Alph. List Invalid Names* 6, 7, 12, 23, 36, & 39. 1942; Moldenke, *Known Geogr. Distrib.* 121, 157, & 178. 1949.

Synonymy: Buchnera cernua Houtt., *Handleid. Pl. Kruidk.* 9: 542--543, pl. 58, fig. 2. 1778 [not B. cernua L., 1771]. Phryma dehiscens L. f., *Suppl. Pl.* 277. 1781. Büchnera cuneifolia L. f., *Suppl. Pl.* 288. 1781. Phryma dehiscens L. apud Thunb., *Prod. Fl. Cap.* 100. 1800. Buchnera cuneifolia L. apud Thunb., *Prod. Fl. Cap.* 100. 1800. Chascanum cuneifolium (L. f.) E. Mey., *Comm. Pl. Afr. Austr.* lxiv, nom. nud. (1836), 1: 276. 1837. Buechnera cuneifolia Thunb. apud E. Mey., *Comm. Pl. Afr. Austr.* 1: 276, in syn. 1837. Plexipus cuneifolius (L. f.) Raf., *Fl. Tellur.* 2: 104. 1837. Buechnera cernua Houtt. apud E. Mey., *Comm. Pl. Afr. Austr.* 1: 276, in syn. 1837. Cascanum cuneifolium E. Mey. apud Maund & Henslow, *Botanist* 4: pl. 196. 1840. Buchnera cuneifolia Thunb. apud Walp., *Repert.* 4: 38, in syn. 1845. Bouchea cuneifolia (L. f.) Schau. in A. DC., *Prodr.* 11: 559. 1847. Deniseia dehiscens (L. f.) Kuntze, *Rev. Gen. Pl.* 3 (2): 250. 1898. Denisaea dehiscens Kuntze apud *Thiselton-Dyer*, *Ind. Kew. Suppl.* 2: 57, in syn. 1904. Phryma hians L. ex Jacks., *Ind. Linn. Herb.* 116, nom. nud. 1912. Bouchea dehiscens (L. f.) Druce, *Rep. Bot. Exch. Club Brit. Isles* 1916: 610. 1917. Marulea crassifolia Schrad. ex Moldenke in Fedde, *Repert.* 45: 149, in syn. 1939. Marrulea crassifolia Schrad. ex Moldenke in Fedde, *Repert.* 45: 149, in syn. 1938. Ragusia cuneifolia Schrad. ex Moldenke, *Revisit. Sudam. Bot.* 6: 17, in syn. 1939. Ragasia cuneifolia Schrad. ex Moldenke, *Revisit. Sudam. Bot.* 6: 17, in syn. 1939. Bouchia cernua Houtt., in herb.

The two unnumbered Thunberg collections cited below are probably cotypes of Büchnera cuneifolia L. f., as is the Thunberg 303 cited by me in Fedde, *Repert.* 45: 151 & 153 (1938). Wood describes the flowers of this species as white, and says that it grows at altitudes of 2000 feet.

Additional citations: UNION OF SOUTH AFRICA: Cape of Good Hope: Collector undesignated s.n. (S); Ecklon & Zeyher s.n. [33.10] (Gg--31961); Thunberg s.n. [1775] (S), s.n. [1781] (S); Verreaux s.n. [C. B. S.] (Du--166400); E. Wall 12, in part (Ew), s.n. [Alexandria distr., 9/11/1938] (S). Natal: J. M. Wood 11664 (Vt). LOCALITY OF COLLECTION UNDESIGNATED: Herb. Mus. Nac. Hist.

Nat. Chile 68284 (Sg).

CHASCANUM GARIPENSE E. Mey.

Literature: E. Mey., Comm. Pl. Afr. Austr. lxiv (1836) and 1: 277. 1837; Schau. in A. DC., Prodr. 11: 560. 1847; Kuntze, Jahrb. Königl. Bot. Gart. Berlin 4: 271. 1900; J. G. Baker in Thiselton-Dyer, Fl. Trop. Afr. 5: 282. 1900; H. H. W. Pearson in Thiselton-Dyer, Fl. Cap. 5 (1): 203--204. 1901; Moldenke, Torreya 34: 9. 1934; Junell, Symb. Bot. Upsal. 4: 21--30 & 172--173, figs. 27 & 36, pl. lm fig. 2. 1934; Moldenke in Fedde, Repert. 45: 309--313. 1938; Moldenke, Revist. Sudam. Bot. 6: 17--18. 1939; Moldenke, Prelim. Alph. List Invalid Names 7 & 15. 1940; Moldenke, Alph. List Invalid Names 6 & 12. 1942; Moldenke, Known Geogr. Distrib. 121 & 178. 1949.

Synonymy: Chascanum garipense E. Mey., Comm. Pl. Afr. Austr. lxiv, nom. nud. (1836), 1: 277. 1837. Bouchea garepensis Schau. in A. DC., Prodr. 11: 560. 1847. Bouchea garipensis var. microphylla Kuntze, Jahrb. Königl. Bot. Gart. Berlin 4: 271. 1900. Bouchea garepensis var. microphylla Kuntze apud J. G. Baker in Thiselton-Dyer, Fl. Trop. Afr. 5: 282. 1900. Bouchea glandulifera H. H. W. Pearson in Thiselton-Dyer, Fl. Cap. 5 (1): 204. 1901. Chascanum glanduliferum (H. H. W. Pearson) Moldenke, Torreya 34: 9. 1934. Bouchea garipensis Schau. ex Moldenke in Fedde, Repert. 45: 309, in syn. 1938. Bouchea gariepina Schau. ex Moldenke in Fedde, Repert. 45: 309, in syn. 1938. Bouchea garipensis (E. Mey.) Schau. ex Moldenke in Fedde, Repert. 45: 309, in syn. 1938. Chascanum gariepensis E. Mey. ex Moldenke in Fedde, Repert. 45: 309, in syn. 1938.

The species is said to inhabit dry mountains, at altitudes of 3500 to 4000 feet, blooming in May, September, and October. Junell, in the reference cited above, gives detailed information about the gynoecium morphology of this species.

Additional citations: UNION OF SOUTH AFRICA: Cape of Good Hope: Haptröm 1117 (S), 1167 (S); G. Lindeberg s.n. [17 September 1936] (S); F. R. R. Schlechter 11410 (Br, F--686752), s.n. [Stickhand, 17.V.1898] (Br, F--686751); Wahlberg s.n. [Zwartzopf river, 1854] (S); E. Wall 12, in part [22/938] (Ew, Go), s.n. [22/9/1938] (S).

CHASCANUM GILLETTII Moldenke

Literature: Moldenke, Revist. Sudam. Bot. 6: 18--19. 1939; Moldenke, Known Geogr. Distrib. 110 & 178. 1949.

Additional citations: BRITISH SOMALILAND: Gillett 4934 (Br--isotype).

CHASCANUM GÜRKEANUM (Loes.) Moldenke, comb. nov.

Bouchea gürkeana Loes. ex Dinter in Fedde, Repert. 15: 352, synonym. 1918.

This species is mentioned also in Fedde, Repert. 38: 256 and is apparently based on Dinter 390, collected in 1917 at Judaea

by Hiachanas, in Namaland, Southwest Africa.

CHASCANUM HANNINGTONII (Oliv.) Moldenke

Literature: Oliv. in Hook., Icon. Pl. 15: 37, pl. 1446. 1883; H. H. W. Pearson in Thiselton-Dyer, Fl. Cap. 5 (1): 283. 1901; Moldenke, Torreyia 23: 9. 1934; Moldenke in Fedde, Repert. 45: 155--156. 1938; Moldenke, Prelim. Alph. List Invalid Names 7, in syn. 1940; Moldenke, Alph. List Invalid Names 6, in syn. 1942; Moldenke, Known Geogr. Distrib. 116 & 178. 1949. Bouchea hanningtonii Oliv. in Hook., Icon. Pl. 15: 37, pl. 1446. 1883.

CHASCANUM HEDERACEUM (Sond.) Moldenke

Literature: Sond., Linnaea 23: 86. 1850; Jacks., Ind. Kew. 1: 327. 1893; H. H. W. Pearson in Thiselton-Dyer, Fl. Cap. 5 (1): 200. 1901; Moldenke, Torreyia 34: 9. 1934; Moldenke in Fedde, Repert. 45: 144--147. 1938; Moldenke, Revist. Sudam. Bot. 6: 19. 1939; Moldenke, Prelim. Alph. List Invalid Names 7 & 8. 1940; Moldenke, Alph. List Invalid Names 6 & 7. 1942; Moldenke, Known Geogr. Distrib. 119, 121, & 178. 1949.

Synonymy: Bouchea hederacea Sond., Linnaea 23: 86. 1850.

Chascanum hederaceum (Sond.) Moldenke, Torreyia 34: 9. 1934.

Bouchea adenostachya var. cuneata H. H. W. Pearson ex Moldenke in Fedde, Repert. 45: 144, in syn. 1938. Bouchea sphenophylla H. H. W. Pearson ex Moldenke in Fedde, Repert. 45: 144, in syn. 1938. Bouchea hederacea Sond. ex Moldenke in Fedde, Repert. 45: 144, in syn. 1938. Bouchea hederacea Sond. ex Moldenke in Fedde, Repert. 45: 144, in syn. 1938.

West describes this species as a small herb, 8 inches tall, common in grasslands. He says the flowers are white, blooming in December.

Additional citations: SOUTHERN RHODESIA: Brain 10868 (Rh--10610); O. West 2280 (Rh--25392), 2452 (Rh--26549). UNION OF SOUTH AFRICA: Cape of Good Hope: J. P. H. Acock 8453 (S). Natal: Gerstner 3169 (Gg--310908). Transvaal: E. E. Galpin 281m [40429] (N).

CHASCANUM HEDERACEUM var. NATALENSE (H. H. W. Pearson) Moldenke

Literature: Gürke, Notizbl. Bot. Gart. Berlin 3: 74. 1900; H. H. W. Pearson in Thiselton-Dyer, Fl. Cap. 5 (1): 200. 1901; Kuntze, Deutsch. Bot. Monatschr. 21: 173. 1903; Prain, Ind. Kew. Suppl. 4: 28. 1913; Moldenke, Phytologia 1: 18. 1933; Moldenke, Torreyia 34: 9. 1934; Moldenke in Fedde, Repert. 45: 147--148. 1938; Moldenke, Revist. Sudam. Bot. 6: 19. 1939; Moldenke, Prelim. Alph. List Invalid Names 7, 8, 15, & 24. 1940; Moldenke, Suppl. List Invalid Names 2 & 11. 1941; Moldenke, Alph. List Invalid Names 6, 7, 12, 13, & 23. 1942; Moldenke, Known Geogr. Distrib. 119, 120, 121, & 178. 1949.

Synonymy: Bouchea wilmsii Gürke, Notizbl. Bot. Gart. Berlin 3: 74. 1900. Bouchea hederacea var. natalensis H. H. W. Pearson in Thiselton-Dyer, Fl. Cap. 5 (1): 200. 1901. Denisia wilmsii

(Gürke) Kuntze, Deutsch. Bot. Monatschr. 21: 173. 1903. Chascanum wilmsii (Gürke) Moldenke, Phytologia 1: 18. 1933. Chascanum hederaceum var. natalense (H. H. W. Pearson) Moldenke, Torreya 34: 9. 1934. Chascanum hederaceum var. natalensis (H. H. W. Pearson) Moldenke, Prelim. List Invalid Names 7. 1940.

Bolus collected this species at an altitude of 1500 feet, blooming in January. Schlechter collected it at 1560 meters altitude.

Additional citations: SWAZILAND: H. Bolus 12228 (Br). UNION OF SOUTH AFRICA: Cape of Good Hope: E. Wall 57 (Ew). Transvaal: F. R. R. Schlechter 3707 (Br), 11771 (Er, F--876752).

CHASCANUM HUBERTI Moldenke

Literature: Moldenke, Phytologia 3: 262 & 294. 1950.

The species is described as a small shrub or subshrub, 1 m. tall, with violet, rose, or pale-rose flowers (or white and pinkish), growing on limestone hills and in rocky places, in tropophilous forests and xerophilous bush, at altitudes of 10 to 300 m. It has been collected in anthesis in January, April, August, September, and November.

Additional citations: MADAGASCAR: Decary 9890 (P); Humbert 11548 (F--photo of type, It--photo of type, N--photo of type, P--type, Z--photo of type), 19813 (P), 19904 (N, P); Humbert & Perrier de la Bâthie 2520 (P); Poisson 511 (N, P), 526 (P).

CHASCANUM INCISUM (H. H. W. Pearson) Moldenke

Literature: Moldenke, Phytologia 1: 18. 1933; Moldenke in Fedde, Repert. 45: 307--309. 1938; Moldenke, Revist. Sudam. Bot. 6: 19--20. 1939; Moldenke, Prelim. List Invalid Names 7. 1940; Moldenke, Alph. List Invalid Names 6. 1942; Moldenke, Known Geogr. Distrib. 121 & 178. 1949. Bouchea incisa H. H. W. Pearson, Trans. S. Afr. Phil. Soc. 15: 180. 1905 [not B. incisa Rusby, 1907].

The species has been collected at an altitude of 830 m., in flower and fruit in March.

Additional citations: UNION OF SOUTH AFRICA: Transvaal: F. R. R. Schlechter 4594 (Ca--299099--isotype).

CHASCANUM INSULARE Moldenke

Literature: Moldenke in Fedde, Repert. 45: 131--132. 1938; Moldenke, Known Geogr. Distrib. 123 & 178. 1949.

The species is said to be suffrutescent, 5--10 dm. tall, the leaves chartaceous (not thin-membranous), sometimes slightly lighter beneath, to 2.7 cm. long and 1.4 cm. wide, the spikes to 20 cm. long, and the corollas rose or pinkish-white, tinted deeper rose in the throat, blooming from November to January. It grows in xerophilous bush on gneiss at altitudes of 400 to 900m.

Additional citations: MADAGASCAR: Decary 9397 (N, P); Humbert 12851 (P), 12920 (P).

CHASCANUM INSULARE var. CANESCENS Moldenke

Literature: Moldenke, *Phytologia* 3: 263 & 294. 1950.

Additional citations: MADAGASCAR: Humbert 19952 (F--photo of type, It--photo of type, N--photo of type, P--type, Z--photo of type).

CHASCANUM INSULARE var. HUMBERTI Moldenke

Literature: Moldenke, *Phytologia* 3: 263 & 294. 1950.

The variety is said to be suffrutescent, 5--10 dm. tall, growing on gneiss in rocky places at altitudes of from 40 to 1500 m., blooming from November through January. The corolla is described as rose, pale-rose, or pinkish-white, tinted deeper rose at the mouth, in the throat, and on the tube.

Additional citations: MADAGASCAR: Humbert 12086 (N, P), 12851 (P), 12920 (P), 13290 (F--photo of type, It--photo of type, N--photo of type, P--type, P--isotype, Z--photo of type).

CHASCANUM INSULARE var. TRIANGULARE Moldenke

Literature: Moldenke, *Phytologia* 3: 263 & 294. 1950.

The flowers are said to be pinkish-white, blooming in August.

Additional citations: MADAGASCAR: Decary 9890 (N, P); Humbert & Swingle 5493 (F--photo of type, It--photo of type, N--photo of type, P--type, Z--photo of type).

CHASCANUM INTEGRIFOLIUM (H. H. W. Pearson) Moldenke

Literature: Moldenke, *Phytologia* 1: 18. 1933; Moldenke in Fedde, *Repert.* 45: 315--317. 1938; Moldenke, *Revisit. Sudam. Bot.* 6: 20. 1939; Moldenke, *Prelim. Alph. List Invalid Names* 7. 1940; Moldenke, *Alph. List Invalid Names* 6. 1942; Moldenke, *Known Geogr. Distrib.* 121 & 178. 1949. Bouchea integrifolia H. H. W. Pearson, *Trans. S. Afr. Phil. Soc.* 15: 179. 1905.

CHASCANUM KROOKII (Gürke) Moldenke

Literature: Moldenke, *Phytologia* 1: 18. 1933; Moldenke in Fedde, *Repert.* 45: 153--155. 1938; Moldenke, *Revisit. Sudam. Bot.* 6: 20. 1939; Moldenke, *Prelim. Alph. List Invalid Names* 7. 1940; Moldenke, *Alph. List Invalid Names* 6. 1942; Moldenke, *Known Geogr. Distrib.* 121 & 178. 1949. Bouchea krookii Gürke ex Zahlbr., *Ann. Nat. Hofmus. Wien* 20: 45. 1905.

The species has been collected in anthesis in October.

Additional citations: UNION OF SOUTH AFRICA: Natal: Wahlberg s.n. [Port Natal, Oct. 1841] (S).

CHASCANUM LATIFOLIUM (Harv.) Moldenke

Literature: Moldenke, *Phytologia* 1: 18. 1933; Moldenke in Fedde, *Repert.* 45: 300--302. 1938; Moldenke, *Revisit. Sudam. Bot.* 6: 20. 1939; Moldenke, *Prelim. Alph. List Invalid Names* 7. 1940; Moldenke, *Alph. List Invalid Names* 6. 1942; Moldenke, *Known Geogr. Distrib.* 121 & 178. 1949. Bouchea latifolia Harv., *Thes. Cap.* 2: 57, pl. 190. 1863; H. H. W. Pearson in *Thiselton-Dyer, Fl. Cap.* 5 (1): 202. 1901.

Additional citations: UNION OF SOUTH AFRICA: Natal: J. M.

Wood s.n. [MacOwan 1511] (F--686761, Vt).

CHASCANUM LATIFOLIUM var. GLABRESCENS (H. H. W. Pearson) Moldenke

Literature: Moldenke in Fedde, Repert. 45: 302--303. 1938; Moldenke, Revist. Sudam. Bot. 6: 20. 1939; Moldenke, Prelim. Alph. List Invalid Names 7. 1940; Moldenke, Alph. List Invalid Names 7. 1942; Moldenke, Known Geogr. Distrib. 121 & 173. 1949. Bouchea latifolia var. glabrescens H. H. W. Pearson in Thiselton-Dyer, Fl. Cap. 5 (1): 203. 1901.

The variety has been collected at an altitude of 5600 feet, blooming in August and December. Sidey describes it as a spreading plant with an underground rootstock and mauve-white flowers. The Bolus 12228 specimen cited below is a mixture of this and C. hederaceum var. natalense.

Additional citations: SWAZILAND: H. Bolus 12228, in part (Br), 12229 (Br). UNION OF SOUTH AFRICA: Transvaal: Sidey 1504 (N, S).

CHASCANUM LIGNOSUM (Dinter) Moldenke

Literature: Moldenke in Fedde, Repert. 46: 2--3. 1938; Moldenke, Revist. Sudam. Bot. 6: 20--21. 1939; Moldenke, Prelim. Alph. List Invalid Names 8. 1940; Moldenke, Alph. List Invalid Names 7. 1942; Moldenke, Known Geogr. Distrib. 121 & 173. 1949. Bouchea lignosa Dinter in Fedde, Repert. Beiheft 53: 53, in obs. 1928. Bouchea namaquana var. latifolia L. Bolus ex Moldenke in Fedde, Repert. 46: 3, in syn. 1938.

CHASCANUM MARRUBIIFOLIUM Fenzl

Literature: R. Br. in Salt, Voyage Abyss. append. lxiii ["lxii"]. 1814; Hochst., Flora 24, Intell. 1: 42. 1841; Walp., Repert. 4: 38. 1845; Schau. in A. DC., Prodr. 11: 558. 1847; Wight, Icon. Plant. Ind. Orient. 4 (3): pl. 1461. 1849; Kuntze, Rev. Gen. Pl. 2: 502. 1891; Jacks., Ind. Kew. 1: 507. 1895; H. H. W. Pearson in Thiselton-Dyer, Fl. Cap. 5 (1): 282. 1901; Moldenke in Fedde, Repert. 45: 132--136. 1938; Monod, Soc. Biogéogr. 6: 368 & 370. 1938; Moldenke, Revist. Sudam. Bot. 6: 21. 1939; Moldenke, Prelim. Alph. List Invalid Names 8, 15, 26, 36, & 42. 1940; Moldenke, Alph. List Invalid Names 7, 12, 25, 36, & 42; Moldenke, Phytologia 2: 95. 1944; Erdtman, Svensk Bot. Tidsk. 39: 281--283, fig. 3. 1945; Moldenke, Known Geogr. Distrib. 109, 110, 114, 117, 123, 124, 157, & 173. 1949; Monod, Contrib. Etude Sahara occid. 2: 113, 114, & 170, pl. 21; Xavier Louis & Monod, Bull. l'Agence Génér. Colon. 27: 605 & 626.

Synonymy: Stachytarpheta cinerea R. Br. in Salt, Voyage Abyss. append. lxiii ["lxii"], nom. nud. 1814. Pleurostigma subrotundum Hochst., Flora 24, Intell. 1: 42, nom. nud. 1841. Chascanum marrubiifolium Fenzl ex Walp., Repert. 4: 38. 1845. Bouchea marrubiifolia (Fenzl) Schau. in A. DC., Prodr. 11: 558. 1847. Bouchea marrubifolia (Fenzl) Schau. apud Wight, Icon. Plant.

Ind. Orient. 4 (3): pl. 1461. 1849. Lafuentea ovalifolia Battand. & Trabut, Bull. Soc. Bot. Franç. 53: xxix--xxx. 1907. Chascanum affine Stocks ex Moldenke in Fedde, Repert. 45: 132, in syn. 1938. Gisania crucianella Ehrenb. ex Moldenke in Fedde, Repert. 45: 132, in syn. 1938. Bouchea marrubiifolia DC. ex Moldenke in Fedde, Repert. 45: 132, in syn. 1938. Bouchéa marrubiifolia Schau. ex Moldenke in Fedde, Repert. 45: 132, in syn. 1938. Chascanum marrubiifolium Walp. ex Sprague in Fedde, Repert. 46: 80. 1939. Chascanum marrubifolium Fenzl ex Moldenke, Prelim. Alph. List Invalid Names 15, in syn. 1940. Chascanum marrubiifolium (Scan) Moldenke, in herb.

Erdtman, in the reference cited above, gives important data concerning the pollen morphology of this species. Monod records the common name of "khachim al-'amma", and states that the plant is eaten by all grazing animals (camels eat it green or dry), but it is inedible to human beings. The genus Lafuentea, which occurs in the synonymy above, is a member of the Scrophulariaceae. The "L. ovalifolia Lag." to which Battand. and Trabut compare their plant is probably an error for L. rotundifolia Lag. Their species was based on an immature plant collected by Chudeau in southern Algeria.

Additional citations: FRENCH WEST AFRICA: Tibesti: Monod 7353 bis (N). FRENCH EQUATORIAL AFRICA: Chad Territory: A. Chevalier 10070 (Br). ANGLO-EGYPTIAN SUDAN: Kordofan: Kotschy 32 (F--686746--isotype). ABYSSINIA: Schimper s.n. [Abyssinia, 1870] (Vt)

CHASCANUM NAMAQUANUM (H. Bolus) Moldenke

Literature: Moldenke, Phytologia 1: 18. 1933; Moldenke in Fedde, Repert. 46: 1--2. 1938; Moldenke, Revist. Sudam. Bot. 6: 21--22. 1939; Moldenke, Prelim. Alph. List Invalid Names 8. 1940; Moldenke, Alph. List Invalid Names 7. 1942; Moldenke, Known Geogr. Distrib. 121 & 178. 1949. Bouchea namaquana H. Bolus ex H. H. W. Pearson in Thiselton-Dyer, Fl. Cap. 5 (1): 204--205. 1901.

CHASCANUM PINNATIFIDUM (L. f.) E. Mey.

Literature: E. Mey., Comm. Pl. Afr. Austr. lxiv, nom. nud. (1836) & 1: 277. 1837; H. H. W. Pearson in Thiselton-Dyer, Fl. Cap. 5 (1): 205. 1901; Moldenke in Fedde, Repert. 45: 303--306. 1938; Moldenke, Revist. Sudam. Bot. 6: 22. 1939; Moldenke, Prelim. Alph. List Invalid Names 8. 1940; Moldenke, Alph. List Invalid Names 7. 1942; Moldenke, Known Geogr. Distrib. 119, 121, & 178. 1949. Büchnera pinnatifida L. f., Suppl. Pl. 288. 1781. Buchnera pinnatifida L. apud Thunb., Prod. Pl. Cap. 100. 1800. Buechnera pinnatifida Thunb. apud E. Mey., Comm. Pl. Afr. Austr. 1: 277, in syn. 1837. Bouchea pinnatifida (L. f.) Schau. in A. DC., Prodr. 11: 560. 1847. Buchnera pinnatifida Thunb. ex Schau. in A. DC., Prodr. 11: 560, in syn. 1847.

Wall collected this species in the mountains at an elevation

of 4500 feet; Rattray found it in red soil, fruiting in December. The flowers are said to be white.

Additional citations: SOUTHERN RHODESIA: Rattray 148 (Rh). UNION OF SOUTH AFRICA: Cape of Good Hope: J. P. H. Acock 5408 (S); Haptröm 789 (S, S). Transvaal: E. E. Galpin 508m (Br, Br, Br); Haptröm & Acock 1318 (S, S); E. Wall 12 [Warmbad, 2/1038] (Ew), 12, in part [Letaba, 22/1038] (Ew), s.n. [2/10/1938] (S), s.n. [22/10/1938] (S).

CHASCANUM PINNATIFIDUM var. RACEMOSUM Schinz & Moldenke

Literature: Moldenke in Fedde, Repert. 45: 306--307. 1938; Moldenke, Revist. Sudam. Bot. 6: 22. 1939; Moldenke, Prelim. Alph. List Invalid Names 8. 1940; Moldenke, Alph. List Invalid Names 7. 1942; Moldenke, Known Geogr. Distrib. 121 & 173. 1949. Bouchea pinnatifida var. racemosa Schinz ex Moldenke in Fedde, Repert. 45: 306, in syn. 1938.

This variety has been found in forests at an altitude of 3500 feet. Its flowers are said to be white, blooming in October.

Additional citations: SOUTHERN RHODESIA: Herb. Queen Victoria Mus. 1142 (Rh). UNION OF SOUTH AFRICA: Cape of Good Hope: E. Wall 12, in part (Go). Transvaal: F. R. R. Schlechter 4593 (Br--isotype); E. Wall s.n. [5/10/1938] (S).

CHASCANUM PUMILUM E. Mey.

Literature: E. Mey., Comm. Pl. Afr. Austr. lxiv, nom. nud. (1836) and 1: 277. 1837; Moldenke in Fedde, Repert. 45: 317--319. 1938; Moldenke, Revist. Sudam. Bot. 6: 22. 1939; Moldenke, Prelim. Alph. List Invalid Names 8. 1940; Moldenke, Alph. List Invalid Names 7. 1942; Moldenke, Known Geogr. Distrib. 118, 121, & 178. 1949. Bouchea pumila (E. Mey.) Schau. in A. DC., Prodr. 11: 560. 1847; H. H. W. Pearson in Thiselton-Dyer, Fl. Cap. 5 (1): 205. 1901. Bouchea pubescens Schau. in A. DC., Prodr. 11: 560. 1847. Bouchea pumila var. subcanescens Sond., Linnaea 23: 86. 1850. Bouchea pumila var. brühliana Gürke ex Moldenke in Fedde, Repert. 45: 317, in syn. 1938.

The "Index Kewensis" cites the binomial Bouchea pumila Schau. to page 553 of DeCandolle's Prodrum -- actually it was published on page 560. The species is said to have cream-colored flowers, blooming in February and November. It has been collected on the sand-veld and at altitudes of 2200 feet.

Additional citations: BECHUANALAND PROTECTORATE: Rodin 3577 (S). UNION OF SOUTH AFRICA: Cape of Good Hope: H. Bolus 12230 (Br).

CHASCANUM RARIFLORUM (A. Terrac.) Moldenke

Literature: Moldenke, Phytologia 1: 167. 1935; Moldenke in Fedde, Repert. 45: 129--130. 1938; Moldenke, Prelim. Alph. List Invalid Names 8 & 26. 1940; Moldenke, Alph. List Invalid Names 7 & 25. 1942; Moldenke, Known Geogr. Distrib. 121 & 178. 1949. Hebenstreitia rariflora A. Terrac., Bull. Soc. Bot. Ital. 1892:

424. 1892. Bouchea rariflora (A. Terrac.) Chiov., Ann. Bot. Roma 9: 127. 1911.

CHASCANUM SCHLECHTERI (Gürke) Moldenke

Literature: Moldenke, Phytologia 1: 18. 1933; Moldenke in Fedde, Repert. 45: 130--131. 1938; Moldenke, Revist. Sudam. Bot. 6: 23. 1939; Moldenke, Prelim. Alph. List Invalid Names 8. 1940; Moldenke, Alph. List Invalid Names 7. 1942; Moldenke, Known Geogr. Distrib. 121 & 178. 1949. Bouchea schlechteri Gürke, Notizbl. Bot. Gart. Berlin 3: 75. 1900; H. H. W. Pearson in Thiselton-Dyer, Fl. Cap. 5 (1): 201. 1901. Denisia schlechteri (Gürke) Kuntze, Deutsch. Bot. Monatschr. 21: 173. 1903.

Additional citations: UNION OF SOUTH AFRICA: Transvaal: F. R. R. Schlechter 11764 (Br--isotype, F--876753--isotype).

CHASCANUM SESSILIFOLIUM (Vatke) Moldenke

Literature: Moldenke, Phytologia 1: 18. 1933; Moldenke in Fedde, Repert. 45: 143--144. 1938; Moldenke, Prelim. Alph. List Invalid Names 8. 1940; Moldenke, Alph. List Invalid Names 7. 1942; Moldenke, Known Geogr. Distrib. 110 & 178. 1949. Bouchea sessilifolia Vatke, Linnaea 43: 529. 1882; H. H. W. Pearson in Thiselton-Dyer, Fl. Cap. 5 (1): 283. 1901.

THE KNOWN GEOGRAPHIC DISTRIBUTION OF THE MEMBERS OF THE VERBENA-CEAE, AVICENNIACEAE, STILBACEAE, SYMPHOREMACEAE, AND ERIOCAULACEAE. SUPPLEMENT 11

Harold N. Moldenke

Since the publication of the last previous installment of these notes, material sent to me for identification has brought to light 3 new county records, 33 new state, province, department, or territory records, 13 new island records, and 13 new country records. These are listed herewith as follows:

UNITED STATES OF AMERICA:

Florida:

Syngonanthus flavidulus (Michx.) Ruhl. [Okeechobee County]

South Dakota:

Verbena hastata L. [Brown County]

Wyoming:

Verbena bracteata Lag. & Rodr. [Goshen County]

TRES MARIAS ISLANDS:

Aegiphila deppeana Steud.

CUBA:

Callicarpa cubensis var. parviflora Moldenke is the correct orthography of this trinomial

Syngonanthus wilsonii Moldenke [Pinar del Río]